AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims:

1 - 9 (cancelled).

10 (previously presented). A voice and musical tone coding apparatus, comprising:

a quadrature transformation processor that converts a voice and musical tone signal from a time component to a frequency component;

an auditory masking characteristic value calculator that finds an auditory masking characteristic value from said voice and musical tone signal; and

a vector quantizer that, when one of said voice and musical tone signal frequency component and elements of code vector is within an auditory masking area indicated by said auditory masking characteristic value, performs vector quantization by changing a method of calculating a distance between said voice and musical tone signal frequency component and said elements of code vector based on said auditory masking characteristic value, to a method whereby said distance is calculated by correcting said one of said voice and musical tone signal frequency component and elements of said code vector in said auditory masking area, in a direction where said distance between said voice and musical tone signal frequency component and elements of said code vector is reduced, to a boundary position in said auditory masking area.

11 (previously presented). A voice and musical tone coding apparatus, comprising:

a quadrature transformation processor that converts a voice and musical tone signal from a time component to a frequency component;

an auditory masking characteristic value calculator that finds an auditory masking characteristic value from said voice and musical tone signal; and

a vector quantizer that, when codes of said voice and musical tone signal frequency component and elements of code vector differ, and said voice and musical tone signal frequency component and said elements of code vector are outside an auditory masking area indicated by said auditory masking characteristic value, performs vector quantization by changing a method of calculating a distance between said voice and musical tone signal frequency component and said elements of code vector based on said auditory masking characteristic value, to a method whereby, in said distance between said voice and musical tone signal frequency component and said elements of code vector, said distance is calculated by correcting a distance between two boundaries of said auditory masking area to a value multiplying said distance between said two boundaries by a coefficient equal to or less than one.

12 (previously presented). A voice and musical tone coding method of a voice and musical tone coding apparatus having a quadrature transformation processor, an auditory masking characteristic value calculator and a vector quantizer, comprising:

converting a voice and musical tone signal from a time component to a frequency component in the quadrature transformation processor;

finding an auditory masking characteristic value from said voice and musical tone signal in the auditory masking characteristic value calculator; and

performing, in the vector quantizer, a vector quantization by changing ~~to change~~ a ~~calculation~~ method of calculating a distance between said voice and musical tone signal frequency component and elements of code vector based on said auditory masking characteristic value, when one of said voice and musical tone signal frequency component and said elements of code vector is within an auditory masking area indicated by said auditory masking characteristic value, to a method whereby said distance is calculated by correcting said one of said voice and musical tone signal frequency component and elements of said code vector in said auditory masking area, in a direction where said distance between said voice and musical tone signal frequency component and elements of said code vector is reduced, to a boundary position in said auditory masking area.

13 (previously presented). A voice and musical tone coding method of a voice and musical tone coding apparatus having a quadrature transformation processor, an auditory masking characteristic value calculator and a vector quantizer, comprising:

converting a voice and musical tone signal from a time component to a frequency component in the quadrature transformation processor;

finding an auditory masking characteristic value from said voice and musical tone signal in the auditory masking characteristic value calculator; and

performing, in the vector quantizer, a vector quantization by changing ~~to change~~ a ~~calculation~~ method of calculating a distance between said voice and musical tone signal frequency component and elements of code vector based on said auditory masking characteristic value, when codes of said voice and musical tone signal frequency component and said elements of code vector differ, and said voice and musical tone signal frequency component and said

elements of code vector are outside an auditory masking area indicated by said auditory masking

characteristic value, to a method whereby, in said distance between said voice and musical tone

signal frequency component and said elements of code vector, said distance is calculated by

correcting a distance between two boundaries of said auditory masking area to a value

multiplying said distance between said two boundaries by a coefficient equal to or less than one.

14 (canceled).

15 (canceled).